

CENTRAL INTELLIGENCE AGENCY

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Development Work at VEB Carl Zeiss Jena

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conference was attended
of the Central Institute

Wenderlich of the Telecommunication Engineering Plant at Berlin-Oberschoeneweide, and Dr. Eckardt of the Institut fuer Festkoerperphysik (Laboratory for Research Work on Solid Bodies) in Berlin. At the conference, Dr. Goerlich proposed that the development of image converters

Worked. The other participants of the conference said that the development of this equipment at the Berlin-Oberschoeneweide Telecommunication such development work had already been started in the meantime, had left the plant.

2. From rumors heard in December 1954 it was inferred that the development of image converters had been discontinued at the Telecommunication Plant and shifted to the VEB Carl Zeiss ~~Planta~~ Jena and the VEB Zeiss Ikon ~~Werk~~ in Dresden.

3. In January 1955, work on the development of detection receivers was being done in Jena. Dr. Krohs, the chief of the Bell Laboratory, and Her Hauenstein did the main work on infrared techniques. In the Electric Laboratory, Karl Prinz ~~mainly~~ worked on thermocouple elements and bolometers functioning at all wave lengths but of lesser sensitivity than the photocells, which operate only on wave lengths up to 3 μ .

4. The type KRS-5 crystals produced in Jena have a permeability of 95 % after deducting reflex losses of 80 %. The permeability has no absorption maxima or minima and evenly extends from 0.8 to 0.4 μ . The absorption sets in below the 0.8 μ point. The quality of the material makes it possible to manufacture from it plane parallel glass 60 mm thick. Prior to the dismantling of the plant by the Soviets it had been possible to manufacture such glass up to a thickness of 120 mm. Ground prisms have not yet been manufactured in Jena. Prior to late 1953, no quartz crystals had

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subjected for weeks to a pressure of about 1,000 atmospheres, are required for use in autoclaves.

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5. Work on the development of the electron-multiplier tube was continued. The first set including the mains unit was to be completed by mid-December 1954. In early January 1955 a set had actually been delivered. The development was continued by Herr Hauenstein after Dr. Buchholz left the Engineering College at Ilmenau as a lecturer.

6. In the summer of 1954, many Czechs, Poles, and Russians visited the Zeiss Works in Jena.

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7. By [redacted] [redacted] had developed a computer. [redacted] Dr. [redacted] had developed a computer. [redacted] Dr. [redacted] had developed a computer. [redacted]

devices for machine tools in Jena. [redacted] had already received an order for the development of automatic measuring and control devices for large lathes. Dipl. Ing. Dietrich of Development Bureau 9 worked on the project. Electric measuring sets were also said to be scheduled for development.

8. The model Oprema electronic computer, the operations of which could be preset, was to be put into operation on 1 May 1955. The equipment which is a "4-Address" (?) computer, was designed as a second electronic computer was scheduled to be completed in June 1955. The latter set is to be used at the Zeiss Works for digital computing. Final decisions on the personnel to operate the computer had yet been taken.

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9. In late January 1955 [redacted] Technology visited [redacted] learned that Prof. [redacted]

of Technology developed two electronic computers which were built by the RFT-Geraetewerk at Chemnitz (apparatus plant for radio and telecommunications engineering techniques). The computer was a so-called one-address set operating at a speed eight times higher than that of the model Oprema computer. Each of the sets built at Chemnitz is fitted with 600 triodes expressly manufactured for this purpose. [redacted] the storage unit of the set still worked in an unsatisfactory way and that difficulties had also been experienced in the making of construction drawings. One of the sets produced was delivered to the Dresden Institute of Technology, while the other computer remained in Chemnitz. It was not intended to manufacture still more of these electronic computers. Lehmann also said that Czechoslovakia had developed a new electronic computer designed as a 5-address relay computer with 20 contact planes.

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interested in details. On 4 March, an Hungarian professor from Budapest visited the Zeiss Works and inquired concerning the delivery terms for a model Oprema electronic computer. On 28 March, the computer was inspected by a correspondent of the Pravda newspaper who had come to Jena via

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Bulgaria, Rumania, Hungary, and Prague.

On 29 March, a Soviet official from Berlin who [redacted] previously had been adviser to the Soviet Minister of Machine Construction, visited the Zeiss Works and also inspected the electronic computer. The Leuna Works were also greatly interested in an electronic computer of the type developed by the Zeiss Works.

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11. Since early 1955, the most important project handled by EHL had been the development of a gyro-controlled aerial mapping camera. The development work was controlled by Dr. Kortum.
12. Development Bureau O of EHL, which was headed by Dipl. Ing. Dietrich, the successor to Oberingen [redacted], Kratsch, is probably [redacted] scheduled to develop [redacted] orders had, however, not [redacted] been received by early [redacted] development of computers for [redacted] artillery fire directo [redacted] been received.
13. In 1954, Dr. Kortum worked on the development of a receiver for infrared rays and made efforts to catch up with the technical achievements of the West in this field. The radiation receiver was to incorporate selenium cell which were designed to give the equipment [redacted] that of American radiation receivers. This work [redacted] because it had ended in an impasse.
14. At the ELQ Laboratory of EHL, Wittig, a master mechanic, manufactured [redacted] various shutters for bolometers. Purely development work was involved [redacted] and only difficulties were apparently experienced in the course of this work.
15. Ing. Lensky who is attached to Dipl. Ing. Dietrich stated that electron-multiplier tubes were being built at the Zeiss Works. Details were not available.
16. Air force training sets of type A₁ were being built at Dr. Ing. Knothe's Department (ELGM Department) of the Suedwerk (Southern Plant). During the last few years, the A₁ sets had repeatedly been modified. In March 1955, the construction records for the A₁ sets were checked and supplemented [redacted] in great haste. It was believed possible that a KVP mission might have to be provided with acceptance records for the A₁ set. Some mechanics of the [redacted] Department who had been detached to other departments were recalled in mid-March.
17. The electronic computer developed in Jena was set up on the second floor of the Zeiss Hochhaus (skyscraper), Entrance No. 6. The equipment was frequently inspected by commissions, in late January 1955 by a KVP commission.

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Comments:

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1. Probably Dr. Alfred Eckardt.

2. Oprema [redacted] [redacted]

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3. Not further identified.

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